

### REMARKS

Applicants appreciate the Examiner's indication that claims 2, 5-11, and 14-22 contain allowable subject matter. Claims 1-29 are now pending. Pursuant to the Examiner's suggestion, Applicants have amended claim 1 for clarity. Support for the amendment to claim 1 is found, for example, at page 1, lines 19-20, of the current specification. Support for new claims 23-26 is found, for example, on page 4 of the present application. Support for new claims 27-29 is found, for example, on pages 8-9 of the application.

#### 35 U.S.C. §112, Second Paragraph

The rejection of claims 1-22 under 35 U.S.C. §112, second paragraph, is traversed, and reconsideration is requested. Although it is respectfully submitted that the present term "hydrogenation" is clear, in order to expedite prosecution, Applicants have amended claim 1 to reflect the term the Examiner kindly suggested, without changing the scope of the claims. Claims 2, 5-11, and 14-22 are indicated on page 4 of the Office action as allowable if re-written in independent form. However, if such amendment was made, the phrase "transfer hydrogenation" to which the Office objected would be present in such claims. It is believed that the Examiner intended to indicate that claims 2, 5-11, and 14-22 are free from art, and would be allowable if claim 1 were amended to use the phrase the Examiner proposed. In any event, the claims have been amended and the Office may properly withdraw this rejection.

#### 35 U.S.C. §103

The rejection of claims 1, 3-4, and 12-13 under 35 U.S.C. §103(a) as being allegedly obvious over Kisch is traversed, and reconsideration is respectfully requested. In order to establish *prima facie* obviousness, 1) all of the elements must be found in the cited reference; 2) there must be a motivation to modify the reference; and 3) there must be a reasonable expectation of success, in accordance with MPEP §2143. First, all of the elements in the rejected claims must be found in the cited reference in accordance with MPEP §2143. It is respectfully submitted that Kisch does not disclose all of the elements defined in the claims. All of the present claims ultimately depend from claim 1 and thus comments with respect to claim 1 apply to all of the present claims. In particular, with respect to claim 1, Kisch does not disclose a ligand that is enantiomerically enriched. For the sake of argument, Kisch's ligand #II (column 2, line 15) may be considered closest to the claimed catalyst, because it contains a nitrogen and a sulphur group. The other Kisch ligands that do not contain a nitrogen and a sulphur group and thus are outside the scope of claim 1. In

contrast to the claimed invention, Kisch's ligand #II is not chiral, nor does Kisch disclose chirality with respect to any molecule disclosed therein. Thus, there is no basis in Kisch for an "enantiomerically enriched ligand" as defined in claim 1. In addition, the Examiner has not established that Kisch discloses or suggests a chiral carbon as defined in claim 4.

Further, with respect to claim 12, the Office has not provided support for all elements in the process for preparing the catalyst in accordance with claim 12. In particular, claim 12 defines a catalyst precursor which contains a transition metal, an anion, and a spectator ligand that is difficult to exchange, which are not disclosed in Kisch.

Further, with respect to claim 13, Kisch does not disclose the process for preparing an enantiomerically enriched compound using the catalyst of claim 1.

Second, there is no motivation to modify Kisch to arrive at the claimed invention as required by MPEP §2143. Kisch's disclosure relates to a completely different technical field than does the present invention, *i.e.*, cleavage of an inorganic molecule (water) to produce hydrogen gas, and does not teach or suggest modifications to arrive at the claimed invention. Applicants respectfully submit that this disclosure would not be contemplated by someone skilled in the field of chiral compounds (*i.e.*, organic compounds) as a process for asymmetrically hydrogenating products for obtaining such chiral compounds as claimed. Even if one skilled in the art would consider the Kisch disclosure, that disclosure would not lead to the present invention. Kisch provides no hint relating to the suitability of Kisch's method for producing organic compounds, let alone chiral compounds.

Third, Applicants respectfully submit that the Office has not established a reasonable expectation of success in accordance with MPEP §2143. Kisch does not address the problem of a low enantiomeric purity during the production of chiral compounds, and thus applicants submit that any modifications of Kisch to arrive at the claimed invention are not expected from Kisch's disclosure.

Thus, a *prima facie* case of obviousness has not been established. As such, this rejection may be properly withdrawn.

With respect to new claims 23-25, in further contrast to Kisch, the sulphur in the defined compound is substituted with a group containing at least one carbon (*i.e.*, R<sub>1</sub>). At least one chiral center in

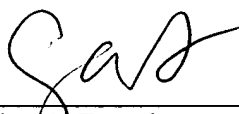
the catalyst is defined. With respect to new claims 27-28, the process for preparing the catalyst is further defined. In addition, new claim 29 defines the metal as iridium, thus further distinguishing over Kisch.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, applicants petition for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket No. 246152016500. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

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Respectfully submitted,

By   
Carolyn A. Favorito  
Registration No.: 39,183  
MORRISON & FOERSTER LLP  
3811 Valley Centre Drive, Suite 500  
San Diego, California 92130  
(858) 720-5195